Hot Topics, Complex Science - Worth Your Class Time? Ruth Buskirk

*Some food for thought and suggestions for designing your lesson:*

1. What is the “Hot topic” of your lesson?

2. Identify and list the benefits of teaching this topic in your class, possibly to include: engage student interest

explore why this is such a hot, complex topic (broad application? ambiguity?

application of new techniques to old problems? personalities?)

introduce current research in science, where and by whom is research done?

relate to and apply your course content, relevant skills and competencies

tie to case study for “thinking like a scientist”

examine how progress is made and identify limitations of research

increase the self-identity of students as scientists, possible retention in STEM

discuss broader society impacts of the research, potential legal & ethical issues

evaluate media sources presenting the science

3. Identify the challenges and potential drawbacks of teaching this topic in your class.

4. Define (for yourself) your teaching goals and priorities for the lesson, and determine what assessments you will do.

5. List potential student learning objectives (assessable, written with action verbs)

6. Design some class activities:

• How will you open class and introduce the topic?

• With what methods and class activities will you teach the complex science?

• Is there preparation the students need to do prior to the lesson?

• What images will help your students understand?

• What will students do during the lesson?

• With what methods and activities will you have students engage with broader issues?

• Do you want students to view and evaluate how this topic is presented in the media?

7. Assessment:

• How will you assess the extent to which your student outcomes (#5) have been met?

• How will you measure student learning? Is the student “experience” alone of value?

• What do you expect your students to retain throughout your course and beyond?

• How will you measure changes in student attitudes? (if applicable)

• How will you decide whether to devote class time to this topic in the future?

• How will you decide whether to change the level at which you taught this topic, perhaps next time just a brief “mention” of this topic? Or, spend more time?